

The listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

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1. (currently amended) An electrochemical device component, comprising:
an active metal electrode having a first surface and a second surface; and
a protective membrane on the first surface of the electrode and having a smooth gap-free interface therewith, the membrane being ionically conductive and chemically compatible with the active metal on a side in contact with the active metal electrode, and substantially impervious, ionically conductive and chemically compatible with active metal corrosive environments on the other side;
wherein the ionic conductivity of the membrane is at least 10^{-5} S/cm at least 10^{-7} S/cm.
2. (currently amended) The component of claim 1, wherein the protective membrane comprises a composite, the composite comprising,
a first material in contact with the electrode, the first material being ionically conductive and chemically compatible with the active metal, wherein the first material comprises a material selected from the group consisting of a composite reaction product of the active metal with a metal nitride, a composite reaction product of the active metal with silicon nitride, a composite reaction product of the active metal with a metal halide, a composite reaction product of the active metal with a metal phosphide, a reaction product of the active metal with red phosphorus, and a reaction product of the active metal with a wetting layer coated on LiPON; and
a second material in contact with the first material, the second material being substantially impervious, ionically conductive and chemically compatible with the first material and active metal corrosive environments, the second material selected from the group consisting of glassy or amorphous metal ion conductors, ceramic active metal ion conductors, and glass-ceramic active metal ion conductors;
wherein the ionic conductivity of the composite is at least 10^{-5} at least 10^{-7} S/cm.
3. (currently amended) The component of claim 2, wherein the ~~ratio of the first material to~~ the thickness of the second material in the composite is less than 1-1000 about 10 to 1000 microns.

4. (original) The component of claim 1, further comprising a current collector on the second surface of the active metal electrode.
- 5-6. (canceled)
7. (original) The component of claim 1, wherein the ionic conductivity of the membrane is at least 10^{-4} S/cm.
8. (original) The component of claim 1, wherein the active metal of the electrode is lithium or a lithium alloy.
9. (currently amended) The component of claim 2, wherein the first material comprises a ~~material selected from the group consisting of active metal nitrides, active metal phosphides, and active metal halides, and active metal phosphorus oxynitride glass~~ a composite reaction product of active metal with a metal nitride.
10. (currently amended) The component of claim 2, wherein the active metal of the electrode is lithium or a lithium alloy, and the first material comprises a material selected from the group consisting of Li_3N , Li_3P and LiI , LiBr , LiCl , LiF , and LiPON a composite reaction product of Li with Cu_3N .
11. (currently amended) The component of claim 2, wherein the second material comprises a ~~material selected from the group consisting of glassy or amorphous metal ion conductors, ceramic active metal ion conductors, and glass-ceramic active metal ion~~ conductor eenductors.
12. (currently amended) The component of claim 2, wherein the second material comprises a material selected from the group consisting of LiPON , Li_3PO_4 , $\text{Li}_2\text{S} \cdot \text{SiS}_2$, $\text{Li}_2\text{S} \cdot \text{GeS}_2$, Ga_2S_3 , LISICON, NASICON, sodium beta-alumina and lithium beta-alumina.
13. (withdrawn) The component of claim 2, wherein the first material comprises a complex of an active metal halide and a polymer.
14. (original) The component of claim 2, wherein the second material is an ion conductive glass-ceramic having the following composition:

Composition	mol %
P_2O_5	26-55%
SiO_2	0-15%
$\text{GeO}_2 + \text{TiO}_2$	25-50%

in which GeO ₂	0--50%
TiO ₂	0--50%
ZrO ₂	0-10%
M ₂ O ₃	0 < 10%
Al ₂ O ₃	0-15%
Ga ₂ O ₃	0-15%
Li ₂ O	3-25%

and containing a predominant crystalline phase composed of $\text{Li}_{1+x}(\text{M}, \text{Al}, \text{Ga})_x(\text{Ge}_{1-y}\text{Ti}_y)_{2-x}(\text{PO}_4)_3$ where $X \leq 0.8$ and $0 \leq Y \leq 1.0$, and where M is an element selected from the group consisting of Nd, Sm, Eu, Gd, Tb, Dy, Ho, Er, Tm and Yb and/or and $\text{Li}_{1+x+y}\text{Q}_x\text{Ti}_{2-x}\text{Si}_y\text{P}_{3-y}\text{O}_{12}$ where $0 < X \leq 0.4$ and $0 < Y \leq 0.6$, and where Q is Al or Ga.

15. (original) The component of claim 2, wherein the second material is a flexible membrane comprising particles of an ion conductive glass-ceramic having the following composition:

Composition	mol %
P ₂ O ₅	26-55%
SiO ₂	0-15%
GeO ₂ + TiO ₂	25-50%
in which GeO ₂	0--50%
TiO ₂	0--50%
ZrO ₂	0-10%
M ₂ O ₃	0 < 10%
Al ₂ O ₃	0-15%
Ga ₂ O ₃	0-15%
Li ₂ O	3-25%

and containing a predominant crystalline phase composed of $\text{Li}_{1+x}(\text{M}, \text{Al}, \text{Ga})_x(\text{Ge}_{1-y}\text{Ti}_y)_{2-x}(\text{PO}_4)_3$ where $X \leq 0.8$ and $0 \leq Y \leq 1.0$, and where M is an element selected from the group consisting of Nd, Sm, Eu, Gd, Tb, Dy, Ho, Er, Tm and Yb and/or and $\text{Li}_{1+x+y}\text{Q}_x\text{Ti}_{2-x}\text{Si}_y\text{P}_{3-y}\text{O}_{12}$ where $0 < X \leq 0.4$ and $0 < Y \leq 0.6$, and where Q is Al or Ga in a solid polymer electrolyte.

16. (currently amended) The component of claim 2 ~~claim 1~~, wherein the protective composite is a laminate of discrete layers of the first material and the second material.

17. (currently amended) The component of claim 2 ~~claim 1~~, wherein the protective composite comprises a gradual transition between the first material and the second material.

18-43. (canceled)

44. (new) The component of claim 9, wherein the metal nitride is copper nitride (Cu_3N).

45. (new) The component of claim 2, wherein the first material comprises a material selected from the group consisting of a composite reaction product of Li with a metal halide.

46. (new) The component of claim 2, wherein the first material comprises a material selected from the group consisting of a composite reaction product of Li with a metal phosphide.

47. (new) The component of claim 2, wherein the first material comprises a material selected from the group consisting of a reaction product of Li with red phosphorus.

48. (new) The component of claim 2, wherein the first material comprises a material selected from the group consisting of a reaction product of Li with a wetting layer coated on LIPON.

49. (new) The component of claim 48, wherein the wetting layer coating is Ag.

50. (new) The component of claim 48, wherein the wetting layer coating is Sn.

51. (new) The component of claim 48, wherein the wetting layer coating is Al.